



PROGRAM GENERATOR
MODEL 1550

PULSE DURATION
1 2 3 4 5 6 7 8 9 10

REPEAT
1 2 3 4 5 6 7 8 9 10

VOLT
1 2 3 4 5 6 7 8 9 10

Channel 1
1 2 3 4 5 6 7 8 9 10

Channel 2
1 2 3 4 5 6 7 8 9 10

Channel 3
1 2 3 4 5 6 7 8 9 10

Channel 4
1 2 3 4 5 6 7 8 9 10

NEGATIVE CURRENT DRIVER
MODE PULSE RATE DURATION

NEGATIVE CURRENT DRIVER
MODE PULSE RATE DURATION

POSITIVE CURRENT DRIVER
MODE PULSE RATE DURATION

POSITIVE CURRENT DRIVER
MODE PULSE RATE DURATION

BATT. DISC. OUTPUT

BATT. DISC. OUTPUT

BATT. DISC. OUTPUT

BATT. DISC. OUTPUT

POWER ON **POWER OFF**

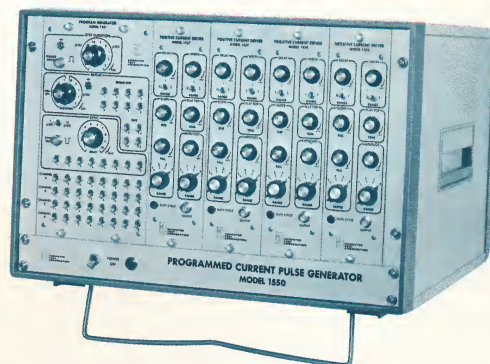
CHANNEL A **CHANNEL B** **CHANNEL C** **CHANNEL D**

PROGRAMMED CURRENT PULSE GENERATOR
MODEL 1550

programming flexibility and precision current waveshape

MODEL 1550 PROGRAMMED CURRENT

The Model 1550 is a convenient bench top cabinet design of a completely self-contained programmed digital test system for both laboratory and production testing of magnetic memory cores and devices. The instrument includes all necessary logic, positive and negative current drivers, power supplies and ventilating equipment. In versatility, precision and performance it meets all the standards of full rack-sized equipment. In economy it is unmatched in the industry. For those applications which require the use of only four current drivers, the Model 1550 represents the ultimate in value.

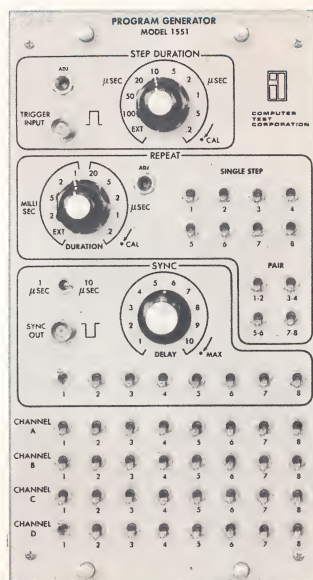


PROGRAM GENERATOR

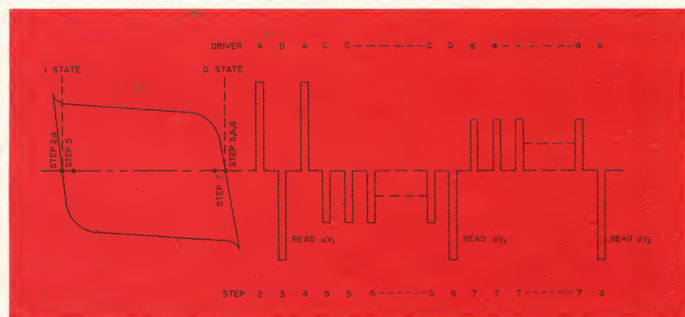
5 Megacycle Operation

Integrated Circuit Design

High speed, 5 mc operation is achieved in the program generator through the use of reliable integrated circuits in the design of the logic. Along with this is the versatility of a full 8 step programming capability that permits repeating selected steps or step pairs within the pre-determined pulse program, as illustrated in the diagram below. The high speed operation and the flexibility in programming provided by the generator equip it to meet most of the required test patterns for evaluating high speed ferrite memory cores.



Typical Pulse Program for Core Testing



Program Selection Any desired pattern of 8 steps can be programmed by merely selecting the appropriate toggle switches at either of the four different output channels (A, B, C, D).

Step Duration The period between successive steps in the program may be continuously varied by a front panel selector switch from $0.2 \mu\text{s}$ to 0.5 ms in 10 calibrated overlapping ranges. The program can also be advanced through successive steps from an external source applied to the Trigger Input connector.

Step-Repeat Single steps or odd-even step pairs can be repeated within the overall test pattern through the use of two independent sets of toggle switches. The repeat interval is controlled by a selector switch which provides 10 calibrated ranges from $0.2 \mu\text{s}$ to 2 ms . One of the positions on this switch permits longer repeat intervals through means of external capacitance.

Programmed Sync Output Sync output pulses are selectively available at any one or more of the program steps through use of a set of 8 toggle switches. This permits selective synchronization of an oscilloscope so that only the desired output steps may be examined or so that the response of the driver load may be analyzed after applying the pre-determined pulse program. The step at which the sync pulse is to occur can be delayed from the start of the program step anywhere up to $10 \mu\text{s}$.

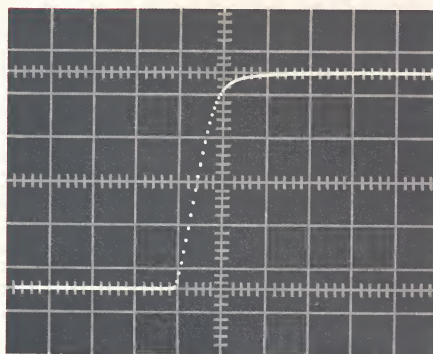
apes in an economical bench top design

CURRENT PULSE GENERATOR

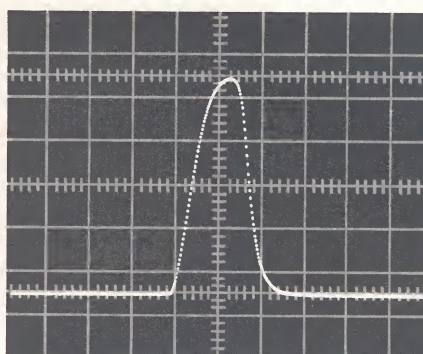
CURRENT DRIVERS

*Linear Rise & Fall
20 ns Pulse Width*

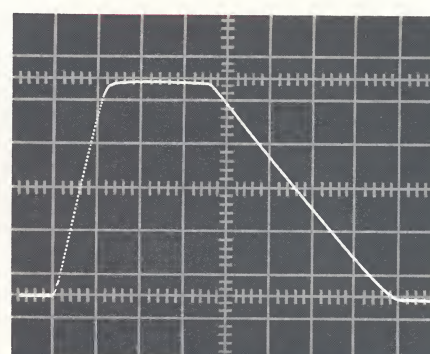
The positive and negative current drivers used in the Model 1550 are characterized by precise waveforms with highly linear, fast rise and fall times and a minimum pulse width of 20 ns. A full 50 volt output and the low output capacitance of these drivers makes them particularly capable for driving inductive loads with high back voltages.



Waveform shows fastest rise time
Hor: 10 ns/cm Vert: 160 ma/cm



Waveform shows minimum width
Hor: 20 ns/cm Vert: 160 ma/cm



Waveform shows independent rise & fall times
Hor: 100 ns/cm Vert: 160 ma/cm

Pulse Width & Delay Pulse width is adjustable in three ranges from a minimum of 20 ns up to 10 μ s. Independent control of pulse delay from 100 ns to 10 μ s is also provided in a three range switch adjustment.

Linear Rise & Fall Both rise and fall time in the drivers are independently variable with both controlled by a common four position range switch. Rise time is adjust-

able from 20 ns minimum to 2 μ s and fall time can be varied from 25 ns minimum to 2 μ s. Linearity of both rise and fall is 3% for slopes greater than 25 ns and amplitudes of less than 800 ma.

Current & Voltage Amplitude Current pulse amplitude of the drivers is continuously variable from 50 ma to 1 ampere controlled by a selector switch with four overlapping ranges. Output voltage for

both positive and negative polarities is 50 volts with the drivers capable of withstanding back e.m.f. of the same magnitude without damage.

Duty Cycle Limiting Each driver shuts off automatically when the 25% duty cycle limit is reached and a front panel indicator lights up. When the overload is removed, the indicator goes off and the driver automatically resets itself.

PROGRAM GENERATOR

Number of Program Steps	8
Program Stepping Frequency	0.2 μ sec to 0.5 ms
Number of Output Channels	4
Number of Repeat Channels	1
Repeat Interval	0.2 μ sec to 2 ms
Programming Modes	Continuous Single step repeat Step pair repeat
Programmed Sync Output	Any one or more of the 8 program steps may be selected for generation of a sync pulse
Sync Output Pulse	Negative-going 2.5 volt pulse d-c referenced from + 2.8 volts. Source impedance 100 Ω . Duration variable from 100 ns to 10 μ s.
Sync Delay	100 ns to 10 μ s continuously variable. Occurs on trailing edge of output pulse.

CURRENT DRIVERS

Number of Current Drivers	4 (2 positive, 2 negative)
Current Pulse Amplitude	50 ma to 1,000 ma in 4 overlapping ranges: Range 1: 50—250 ma. Range 2: 100—500 ma. Range 3: 150—750 ma. Range 4: 200—1,000 ma.
Output Voltage	± 45 ± 50 volts maximum.
Rise Time	20 ns to 2 μ s, continuously variable.
Fall Time	25 ns to 2 μ s, continuously variable.
Linearity of Rise/Fall Time	3% for all slopes greater than 25 ns and amplitudes less than 800 ma.
Pulse Width	Variable from 20 ns to 10 μ s.
Pulse Delay	Variable from 100 ns to 10 μ s.
Maximum Duty Cycle	25% automatically limited.
Leakage Current	2 μ amperes maximum at 25°C.
Source Impedance	5,000 Ω at 800 ma output current.



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- ☐ I am interested in seeing a demonstration of your equipment.

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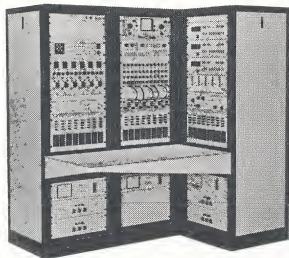
Telephone: Area Code_____Number_____

Here Is The Information You Requested

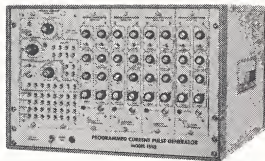
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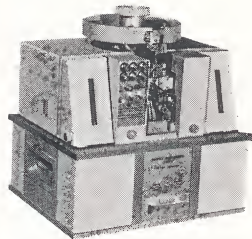




Memory Test Systems



Memory Test Equipment



Memory Core Handlers

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